

### ADVANCE Program for Inclusive Excellence

Advancing women, transforming the University, investing in a culture of inclusive excellence



## College of Computer, Mathematical and Natural Sciences

### 2015 Faculty Work Environment Survey Results

*The University of Maryland Faculty Work Environment Survey (FWES) was designed to measure the degree to which faculty perceive and experience their units, colleges, and the university to be investing in their professional growth and creating an inclusive work environment. Much social science and educational research has found that supporting faculty professional growth (agency, learning, professional networks, and recognition) and creating inclusive work environments (fair workload, diversity climate, work-life climate) is linked to faculty retention, advancement and productivity. The Faculty Work Environment Survey (FWES) was designed and implemented by the University of Maryland ADVANCE Program with support and consultation from the Office of Faculty Affairs and Office of Diversity & Inclusion. The FWES was implemented in spring, 2011, 2013, & 2015.*

This brief summarizes results from tenure track faculty participants from the College of Computer, Mathematical, and Natural Sciences in spring, 2015. A full institution-wide report, as well as longer College of Computer, Mathematical, and Natural Sciences report can be found at the ADVANCE website, research and evaluation section:

<http://www.advance.umd.edu/research/research-evaluation>

### RESPONDENTS

53% (n=172) of full-time UMD tenure track or tenured Computer, Mathematical, or Natural Sciences (CMNS) faculty completed the work environment survey. Demographics of respondents included:

- 18.6% female, 81.4% male faculty
- 14.0% Faculty of Color, 86.0% White faculty
- 14.5% Assistant, 24.5% Associate, and 61.0% Full Professors

### SURVEY RESULTS

Comparisons are provided between CMNS and all University of Maryland tenure track/ tenured respondents. Full-time non-tenure track faculty survey responses will be provided in a forthcoming report.

#### Faculty Learning and Institutional Support for Learning

- 57.6% of CMNS respondents agree that their unit supports their learning external to campus and 52.9% of CMNS respondents agree that their unit has helped them to make room among their responsibilities for immersing themselves in their academic learning.
- CMNS respondents were more likely than UMD respondents overall to agree that in the last 12 months they have gained knowledge or skills that have made them a better teacher (75.1% of CMNS vs. 66.4% of UMD respondents) and contributed to their research and/or scholarly agenda (83.6% of CMNS vs. 74.9% of UMD), and that they set aside time to advance their scholarly learning (79.4% of CMNS vs. 73.0% of UMD respondents).
- CMNS respondents were more likely than UMD respondents overall to perceive that their unit (68.6% of CMNS vs. 58.1% of UMD) and the

university (60.0% of CMNS vs. 51.7% of UMD) provides an environment that stimulates their academic learning.

- However, CMNS respondents were less likely than UMD respondents overall to indicate that their unit has financially supported their learning in their field or discipline (34.3% of CMNS vs. 48.4% of UMD respondents).
- CMNS women faculty were less likely than CMNS men faculty to agree that their unit has financially supported their learning in their field or discipline.
- CMNS Faculty of Color were more likely than CMNS White faculty to agree that their unit provides an environment that stimulates their academic learning.
- Differences were found between Associate Professors and faculty at other ranks.
  - They were less likely than Assistant Professors to agree that their unit supports their learning external to campus, and that the university provides an environment that stimulates their academic learning.
  - They were less likely than Full Professors to perceive that their unit has helped them to make room among their responsibilities for immersing themselves in their academic learning.
  - They were also less likely than either Assistant or Full Professor to agree that their unit provides an environment that stimulates their academic learning.
- Assistant Professors were more likely than either Associate or Full Professors to indicate that their unit has financially supported their learning in their field or discipline.

### **Professional Networks and Institutional Support of Professional Networks**

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- 67.4% of CMNS respondents indicated they had relationships with other faculty on campus that had supported their career advancement, 63.4% received useful feedback from colleagues at UMD that improved their work, 69.2% indicated they are satisfied with

the collegiality in their unit, and 64.0% reported they have a voice in decision-making in their unit.

- CMNS respondents were less likely than other UMD respondents overall to have a core discussion network that lets them know of professional opportunities (63.1% of CMNS vs. 71.4% of UMD faculty), but more likely to be satisfied with the opportunities they have to collaborate with other UMD faculty (64.3% of CMNS vs. 55.8% of UMD faculty).
- CMNS respondents were less likely than UMD respondents overall to have their core discussion network off campus (50.9% of CMNS vs. 59.0% of UMD).
- CMNS women faculty were less likely than CMNS men faculty to agree that their core discussion network includes one or more members who are influential in their field.
- CMNS women faculty were also less likely than CMNS men faculty to receive useful feedback from colleagues at UMD that improves their work, less likely to indicate that individuals at this institution have made an effort to connect them with important people in their field, and more likely to feel isolated in their department.
- Assistant Professors were more likely than Associate or Full Professors within CMNS to be satisfied with the institutional support for professional networks. They were also more likely than Full Professors to have relationships with other faculty on campus that have supported their career advancement.
- Assistant Professors were more likely than Associate or Full Professors within CMNS to have been effectively mentored by someone in their unit.

### **Recognition**

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- 64.3% of CMNS respondents feel recognition for their teaching and 63.1% feel recognition for their service contributions. 62.1% of CMNS respondents perceive other faculty care about their personal well-being.
- CMNS respondents were more likely than UMD respondents to perceive that their

research/scholarship is valued by faculty in their unit (75.0% of CMNS vs. 71.1% of UMD).

- CMNS respondents were less likely than UMD respondents to have been nominated over the last three years by someone at UMD for an award (26.8% of CMNS vs. 33.7% of UMD).
- CMNS women faculty were less likely than CMNS men faculty to agree that faculty in their unit value their teaching and service contributions and care about their personal well being.
- CMNS Faculty of Color were more likely than CMNS White faculty to agree that faculty in their unit value their teaching contributions.
- Associate Professors were less likely than Assistant Professors to agree that faculty in their unit care about their personal well being.

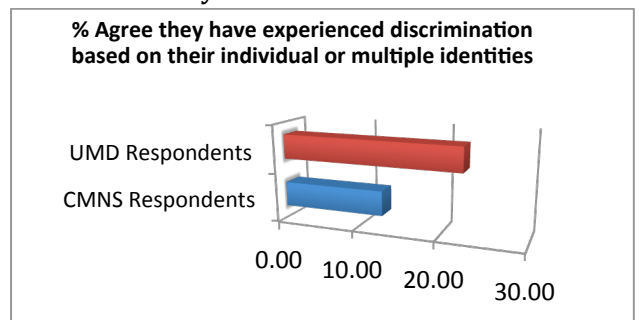
*“There are more expectations from female faculty for service activities and no reward. Only male colleagues are nominated for DST awards, outstanding director awards etc.”*

### Diversity and Inclusion

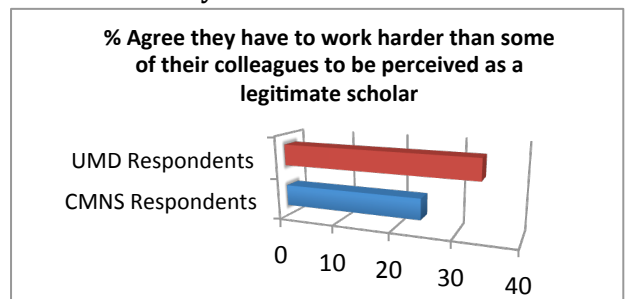
- 77.4% of CMNS faculty perceive that their unit makes genuine efforts to recruit female faculty and 62.5% perceive that their unit makes genuine efforts to recruit Faculty of Color.
- CMNS respondents were more likely than UMD respondents overall to agree that the opportunities for female faculty at UMD are at least as good as those for male faculty (57.7% of CMNS vs. 50.5% of UMD respondents), and that the opportunities for Faculty of Color at UMD are at least as good as those for White faculty (55.1% for CMNS vs. 46.5% of UMD respondents).
- CMNS respondents were less likely than UMD respondents to agree that they have to work harder than some of their colleagues to be perceived as a legitimate scholar (24.4% of CMNS vs. 33.8% of UMD respondents).
- CMNS respondents were less likely to have experienced discrimination in their unit based on their individual or multiple identities (12.9% of CMNS vs. 22.6% of UMD respondents).

- CMNS women faculty were less likely than CMNS men faculty to agree that the opportunities for female faculty and Faculty of Color at UMD are at least as good as those for male and White faculty, and that their unit makes genuine efforts to recruit female faculty and Faculty of Color.
- CMNS women faculty were more likely than CMNS men faculty to perceive that they have to work harder than some of their colleagues to be perceived as a legitimate scholar, and were more likely to indicate that they have experienced discrimination in their unit based on their individual or multiple identities.
- CMNS Faculty of Color were more likely than CMNS White faculty to perceive that their unit makes genuine efforts to recruit female faculty.

**Chart I. Faculty Perception of Diversity and Inclusion Survey Items**



**Chart 2: Faculty Perception of Diversity and Inclusion Survey Items**



*“I received systematic discrimination as a young female faculty member here in many ways... My department is much better in that regard now.”*

### Work-Life Integration

- About two thirds of CMNS respondents agreed that they have taken strategic steps toward creating a satisfactory work-life balance, they

have control over creating a satisfying work-life balance, and that in their unit faculty can be honest with colleagues about family/life roles and responsibilities.

- CMNS respondents were more likely than UMD respondents to be satisfied with their unit's culture around work-life balance (57.1% of CMNS vs. 51.7% of UMD respondents).
- CMNS women faculty were less likely than CMNS men faculty to agree that there are role models in their unit for how to create a satisfying work-life balance.

- Associate Professors in CMNS were less likely than Full Professors in CMNS to perceive the promotion requirements and process for advancing to Full Professors as clear and fair. Associate Professors were more likely than faculty at other ranks within CMNS to feel stuck in their ability to advance in their career.
- Assistant Professors in CMNS were more likely than faculty at other ranks in CMNS to have received helpful feedback from their department chair/unit head in support of their career advancement.

### **Career Advancement and Institutional Support of Career Advancement**

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- CMNS respondents were more likely than UMD respondents overall to agree that faculty in their unit have the freedom to succeed if they work hard (74.6% of CMNS vs. 69.5% of UMD respondents).
- CMNS respondents were more likely than UMD respondents overall to perceive clear requirements and fair processes for tenure and for advancing to Full Professor.
- CMNS respondents were less likely than UMD respondents overall to have concerns about their own advancement (25.7% of CMNS vs. 34.7% of UMD respondents).
- CMNS women faculty differed from CMNS men faculty in several ways.
  - Women were less likely than men in CMNS to agree that they have intentionally made choices to focus their career in ways that are personally meaningful to them.
  - CMNS women faculty were less likely than CMNS men faculty to agree that faculty in their unit have the freedom to succeed there if they work hard.
  - CMNS women faculty perceived tenure requirements and process in their unit as less clear and fair than CMNS men faculty.
  - CMNS women faculty were also more likely than CMNS men faculty to have concerns about their opportunities for career advancement at UMD.

### **Evaluation of Research and Creative Work**

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- 57.9% of CMNS respondents agreed that interdisciplinary scholarship is rewarded in their unit. 49% of CMNS respondents agreed that engaged scholarship is rewarded in their unit.
- CMNS respondents were more likely than UMD respondents overall to agree that collaborative research and grant work is encouraged in their unit's reward system (66.1% of CMNS vs. 55.5% of UMD), and that faculty in their unit are rewarded for taking risks and trying to be cutting edge in their research (50.6% of CMNS vs. 44.4% of UMD respondents).
- CMNS women faculty were less likely than CMNS men faculty to agree that engaged and interdisciplinary scholarship is rewarded in their unit and that collaborative research and grant work is encouraged.
- Associate Professors were less likely than Assistant Professors to agree that collaborative research and grant work is encouraged in their unit's reward system.

### **Fair and Manageable Workload**

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- 73.1% of CMNS respondents agreed that managing their teaching responsibilities is largely under their control, and 59.1% agreed that there is support in their department for effective teaching.
- CMNS respondents were more likely than UMD respondents overall:

- To agree that their research agenda is largely under their control (93.0% vs. 88.7%);
- To feel in control of their participation in service activities (63.9% vs. 52.90%);
- To agree that it is possible for them to say no to additional on-campus service activities without negative consequences (60.8% vs. 52.1%); and
- To perceive the distribution of campus service work in their unit is fair (74.7% vs. 63.9%).
- CMNS women faculty were less likely than CMNS men faculty to indicate that it is possible for them to say no to additional on-campus service activities without negative consequences for their career.

### Leadership Opportunities

- 37.2% of CMNS respondents agreed that they have been encouraged at least once during the past twelve months to pursue a leadership position.
- Among CMNS respondents, the number of faculty who reported being encouraged to pursue a leadership position at least once during the past 12 months increased with rank.

### Satisfaction with Resources and Conditions at UMD

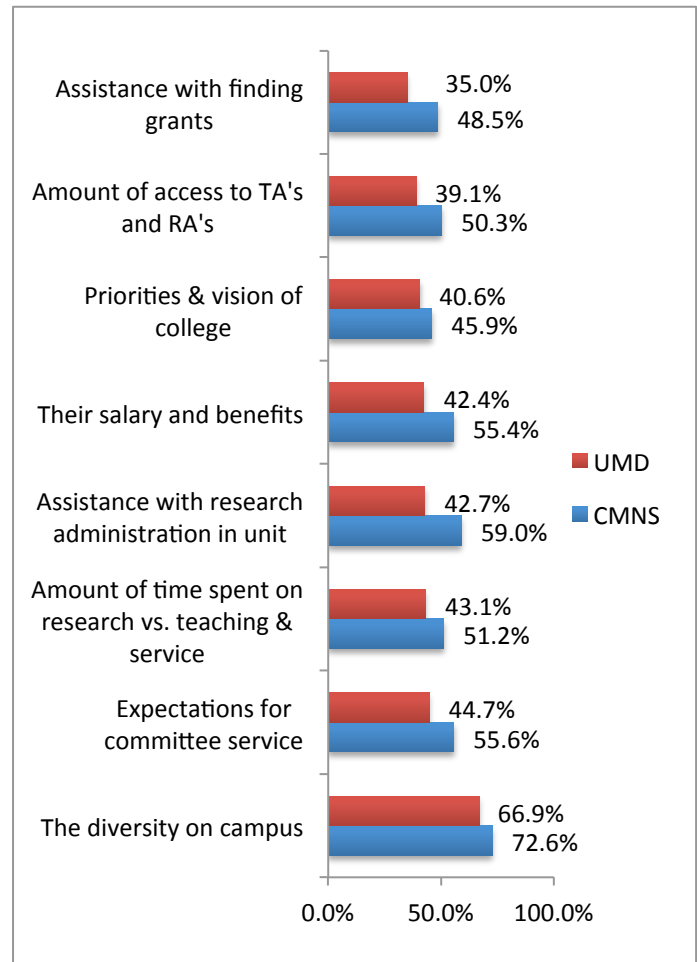
CMNS respondents were more likely than UMD respondents to be satisfied with several resources and conditions at UMD. See Chart 3 for details.

CMNS women faculty were less likely than CMNS men faculty to be satisfied with:

- The amount of access to TAs and RAs;
- The amount of time they spend on research versus teaching and service;
- The transparency of decision-making within their unit;
- The support of colleagues;
- The sense of fit between their values and those of their unit; and

- Their overall experience working in their unit.
- CMNS Faculty of Color were more likely than CMNS White faculty to be satisfied with the transparency of decision-making within their unit, the sense of fit between their values and those of their unit, the quality of campus facilities; and the priorities and vision of their college.

**Chart 3: Satisfaction with Resources and Conditions at UMD**



- Associate Professors were also less likely than Full or Assistant Professors in CMNS to be satisfied with:
  - Finding grants;
  - Amount of time they spend on research versus teaching and service;
  - The transparency of decision-making within their unit;
  - The support of colleagues;
  - The sense of fit between their values and those of their unit;

- The quality of campus facilities;
- The priorities and vision of their college;
- Their overall experience with their unit; and
- The quality of graduate students in their program.
- Assistant Professors were more likely than Associate or Full Professors in CMNS to be satisfied with their overall experience at UMD, their salary and benefits, and clerical/administrative support.
- Full Professors were less likely than Assistant Professors in CMNS to be satisfied with the university's national reputation.

- Assistant Professors were more likely than Full Professors in CMNS to intend to leave the university or the academic profession in the next two years for career opportunities at another institution for their spouse/partner.

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### Perceptions of Productivity

- 50.6% of CMNS respondents ranked themselves as more productive than researchers of their rank nationwide.
- 42.1% of CMNS respondents believed their unit views them as more productive than researchers of their rank nationwide.
- CMNS women faculty were less likely than CMNS men faculty to perceive that their unit views their overall research/scholarly productivity as productive compared to researchers/scholars of their rank nationwide.
- Associate Professors were less likely than Full Professors to rate their overall research/scholarly productivity as more productive than that of scholars of their rank nationwide, and to perceive their unit views of their research productivity as more productive than that of scholars of their rank nationwide.

*“As far as I am concerned, my department and other entities do an excellent job enabling me to pursue my research activities.”*

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### Organizational Commitment and Intent to Leave

- 22.5% of CMNS respondents vs. 27.6% of UMD respondents stated they were likely to leave the university in the next two years.
- The most frequent reasons CMNS respondents listed for intending to leave UMD were for an offer from a more prestigious department or institution (22.1%), for a higher salary (11.0%), retirement (7.6%), and for an offer from an institution in a more desirable geographic location (7.0%).
- When indicating intent to leave the university or the academic profession, CMNS respondents were more likely than UMD respondents overall to note they might leave for an offer from a more prestigious department or institution (22.1% of CMNS vs. 14.3% of UMD), and for an offer from an institution in a more desirable geographic location (7.0% of CMNS vs. 4.2% of UMD), but less likely to leave for a higher salary (11.0% of CMNS vs. 20.6% of UMD respondents).
- CMNS women faculty were more likely than CMNS men faculty to indicate their intent to leave the academic profession in the next two years.

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### TO CITE THIS BRIEF:

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## Comparison of CMNS Faculty Work Environment Data by Year on Select Items

Survey Findings from the College of Computer, Mathematical and Natural Sciences	2011	2013	2015
	% Agree/Strongly Agree		
<b>Faculty Learning and Institutional Support for Learning</b>			
The University provides an environment that stimulates my academic learning.	54%	60.4%	68.6%
<b>Professional Networks and Institutional Support of Professional Networks</b>			
I feel isolated in my department.	26%	25.9%	20.3%
I am satisfied with the collegiality in my unit.	52%	64.9%	69.2%
I am satisfied with the opportunity to collaborate with other UMD faculty.	55%	55.6%	64.3%
<b>Diversity and Inclusion</b>			
The opportunities for female faculty at UMD are at least as good as those for male faculty.	73%	63.3%	57.7%
The opportunities for Faculty of Color at UMD are at least as good as those for White faculty.	64%	66.4%	55.1%
I have experienced discrimination in my unit based on my individual or multiple identities.	15%	16.1%	12.9%
<b>Work-Life Integration</b>			
I am satisfied with my unit's culture around work-life balance.	43%	53.5%	57.1%
The institution does what it can to make family life and the tenure track compatible.	22%	33.9%	36.3%
<b>Career Advancement and Institutional Support of Career Advancement</b>			
In my unit, the tenure requirements are clear.	75%	75.4%	76.9%
In my unit, the promotion requirements for advancing to Full Professor are clear.	57%	63.1%	66.3%
In my unit, the tenure process is fair.	79%	79.1%	82.0%
In my unit, the promotion process for advancing to Full Professor is fair.	73%	67.7%	69.5%
I have concerns about my own career advancement at UMD.	40%	28.7%	25.7%
<b>Fair and Manageable Workload</b>			
I feel in control of my participation in service activities.	55%	56.8%	63.9%
There is support in my department for effective teaching.	41%	45%	59.1%
It is possible for me to say no to additional on-campus service activities without negative consequences.	54%	56.5%	60.8%
I am satisfied with the amount of time spent on research versus teaching and service.	38%	54.3%	51.2%
<b>Satisfaction with Resources and Conditions at UMD</b>			
I am satisfied with my overall experience working at UM.	60%	62.8%	64.3%
I am satisfied with my overall experience working in my unit.	61%	66.4%	74.4%
I am likely to leave the university in the next two years.	19%	23.8%	22.5%

In 2011, 32% of CMNS tenure track faculty responded to the FWES, in 2013 39%, and in 2015 53%.

**ADVANCE Program for Inclusive Excellence** aims to improve work environments and opportunities for women faculty in ways that improve the university for all. ADVANCE is Directed by Professor KerryAnn O'Meara and coordinated by Kristen Corrigan, Projects Manager. ADVANCE reports to the Provost's Office and is located in 1402 Marie Mount Hall. Founded initially through an NSF ADVANCE grant, the program is now supported by the campus, and engages in four activities found to have high impact in supporting faculty and improving work environments: (a) Strategic Networks (for assistant professors, associate professors, ADVANCE professors, under-represented faculty of color, leadership fellows and professional track faculty); (b) ADVANCE Professors assigned to each college to mentor women faculty and work with Deans to create structures and cultures of support; (c) Data collection, analysis and dissemination to increase awareness of equity issues, mentor, and improve work environments (e.g., faculty work environment survey and dashboard); and (d) Crafting policy change as relevant with other offices in areas that specifically affect women faculty.